UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,266	12/12/2001	Michael Wayne Brown	AUS290010825US1	1753

			EXAMINER
43307	7590	08/27/2004	UBILES, MARIE C

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Jun 15, 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-18, 20-26 and 28-36* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *31-33* is/are allowed.

6)☒ Claim(s) *1-5,7-18,20-26,28-30 and 34-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's amendment filed on June 15, 2004 has been entered. Claims 1, 11,

12, 14, 24-26 and 28-33 have been amended. Claims 6, 19 and 27 have been

cancelled. Claims 34-36 have been added. Claims 1-5, 7-18, 20-36 are still pending in

this application, with claims 1, 12, 14, 25 and 31-33 being independent.

Allowable Subject Matter

2.   Claims 31-33 are allowed.

Claim Rejections - 35 USC § 103

3.   Claims 1-4, 9-10, 12, 14-17, 22-23 and 25-26 are rejected under 35 U.S.C.

103(a) as being unpatentable over Shtivelman (US 6,157,655) in view of Duncan et al.

(US 2002/0141561) and further in view of Barber et al. (US 6088435) .

As for claim 1, Shtivelman discloses a method for estimating wait times within a

hold queue (See Summary of the Invention, Col. 4, lines 35-36) comprising, estimating

a plurality of call times individually for each of said plurality of calls (as read on "*Th,*

average time handling each call") within a call center (or *communication center 51*)

(See Summary of the Invention, Col. 4, lines 37-48); positioning a particular call

received from a particular caller at said call center within a hold queue (as read on

"designated call in the call-waiting queue") (See Summary of the Invention, Col. 4, lines

36-37); and estimating a wait time in said hold queue for said particular call according to

said plurality of call times individually estimated for said plurality of calls within said call

center (as read on *N, total calls in queue* and *Th, average time handling each call*) (See

Description of the Preferred Embodiments, Col. 10, lines 60-67 and Col. 11, lines 1-20).

It can be seen that Shtivelman's system lacks the limitations specifying "receiving

a plurality of calls at a call center, wherein each call associated with a call from among

said plurality of calls is identified by an authenticated caller identifier", "retrieving, for

each caller according to said authenticated caller identifier, a caller profile from among a

plurality of caller profiles, wherein each of said plurality of caller profiles indicates a

previous call center usage history for each said caller", and wherein estimating a

plurality of call times [...] is "based on said previous call center usage history for each

user".

In regards to those limitations, Duncan et al. teaches, "The call evaluation sub-

module uses algorithms and models provided by a modeling module that analyzes

inbound call histories to forecast outcomes of pending inbound calls. It utilizes the

forecasts to compute priority values. For example, in the modeling module, performing

logistic regression on prior inbound calls using caller and/or call information and prior

call history as independent (or predictive) variables and a dependent variable of caller

attrition, provides a model that forecasts pending inbound caller attrition based on the

caller and/or call information. Alternatively, performing linear regression modeling on

prior inbound calls, using caller and/or call information as independent (or predictive)

variables and a dependent variable of connect time, provides a model that forecasts

the expected agent talk time for each incoming call. [...] Incoming calls accepted by a

call receiving device, such as an ACD or VRU, provide calling information, such as

DNIS information or account information provided by the caller, to allow evaluation

of the value of the customer, such as an estimation of probable future customer

behavior.[...] Inbound telephone call receiving device 20 accepts inbound telephone

calls through interface 22 and obtains caller information associated with the inbound

calls such as ANI and DNIS information. When receiving device 20 includes a VRU,

additional caller information, such as account information, is obtained through

automated interaction with the inbound callers." (See Para. 0018, 0021, lines 5-10,

0036, lines 1-4).

Barber et al further teaches "The personal information portion of the subscriber

record includes information used to identify the subscriber, authenticate the

subscriber's identity, bill the subscriber for services, and establish calls to the

subscriber from a requesting subscriber. This information is maintained in secrecy

within a database in the network. Record 50 includes a subscriber identifier that is

stored within a subscriber identifier field 52 and uniquely associates a particular record

with a given subscriber. The subscriber identifier could be any convenient identifier,

such as a string of alphanumeric characters or the automatic number identifier (ANI) of

the subscriber's home telephone." (See Col. 2, line 66 through Col. 3, line 9).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made, to modify Shtivelman's system by adding the features of caller

prior call history retrieval based on ANI, DNIS or account information and use the

aforementioned caller prior call history to estimate a wait time of a caller (or estimation

of probable customer behavior), as taught by Duncan et al.; and thus in this manner provide a system that will allow agents to respond to customers that are more sensitive to holding time before responding to customers who are less sensitive to holding time.

As taught by Barber et al., it can be appreciated that ANIs, DNISs, call account numbers may be used to authenticate the identity of a caller (i.e. authenticated caller identifier). Further, Examiner points out that system and methods in which ANI strings are used to authenticate a caller are well known in the art, for example, a caller trying to validate a credit card by means of contacting a call center may be authenticated by calling from his or her own phone number and comparing this number with the number stored in the caller's profile at the call center.

As for claim 2, Shtivelman discloses the method as claimed, wherein estimating a plurality of call times further comprises, estimating said plurality of calls according to an average time per representative (See Summary of the Invention, Col. 4, lines 62-67 and Col. 5, lines 1-2).

As for claims 3, Shtivelman discloses the method as claimed wherein said average time per representative is further specified according to a subject (or *agent skill*) (See Fig. 3 and Description of the Preferred Embodiments, Col. 10, lines 1-11).

As for claim 4, Shtivelman discloses the method as claimed for estimating wait times within a hold queue, wherein said average time per caller is further specified according to an average time of a total call within said call center (See summary of the Invention, Col. 4, lines 40-41).

As for claims 9-10 and 22-23, it is inherent from Shtivelman that a plurality of

calls are waiting in said hold queue (as read on *N, total calls in queue*) and that said

plurality of calls are assisted by a plurality of representatives (or *agents*) within said call

center (or *ACD*) (See Abstract, lines 1-4 and Description of the Preferred Embodiments,

Col 11, line 20).

Claims 12, 14 and 25 are rejected for the same reasons as claim 1. It is inherent

from Shtivelman that a recording medium is used for the hold queue process (as read

on use of Stat-server) (See Description of the Preferred Embodiments, Col. 9, lines 27-

32).

Claims 15 and 26 are rejected for the same reasons as claim 2.

Claim 16 is rejected for the same reasons as claim 3.

Claim 17 is rejected for the same reasons as claim 4.

4.   Claims 11, 13, 24 and 30-33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Shtivelman (US 6,157,655) in view of Duncan et al. (US

2002/01411561) and in view of Barber et al. (US 6,088,435) as applied to claim 1-4, 9-

10, 12, 14-17, 22-23 and 25-26 above, and further in view of Eitel et al. (US 5,933,828).

The combination of Shtivelman, Duncan et al. and Barber et al. teaches the

system as claimed except for "updating a caller profile server according to a session for

said particular call according to said authenticated identifier for a said particular caller,

wherein said caller profile server maintains a plurality of caller profiles stored according

to a plurality of caller profiles stored according to a plurality of authenticated identifiers

for compiling information about sessions at at least one call center".

As for claim 11, Eitel teaches "Information such as the ANTI number may be

used by a processor of the ACD switch 22 to search the database 40 of the server 36 to

identify the caller. Upon identifying the caller, other records of the database 40 may be

searched to retrieve a customer file. An identifier of the customer file may also be

placed in the call processing file. [...] While the call is in the queue, the processor of the

ACD 22 periodically updates a timer measuring the total time that the call has been in

the queue. The total time in the queue is also stored in the database 40 as part of the

call processing history in the call file." (See Col. 3, lines 49-65).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the combination of Shtivelman, Duncan et al. and Eitel et

al. by adding the method of updating in a server (or caller profile server) information

regarding a specific caller and storing total queue of caller in server (or "updating caller

profile according to a session"); and thus in this manner provide a system capable of

future call tracking and performance monitoring.

As for claim 13, Eitel et al. teaches the method wherein a caller profile (or *call

file*) is received from at least one profile server (or *database 40*), wherein said at least

one profile server is accessible to a call server (See Detailed Description, Col. 3, lines

61-67 and Col. 4, lines 1-5). Eitel et al. suggests that these can be applied to a plurality

of caller profiles (as read on *"other records of the database 40 may be searched"*) (See

Detailed Description, Col. 3, line 52) and profiles are available to a plurality of call

centers (or *ACDs*) (See Detailed Description, Col. 3, lines 19-24).

Claims 24 and 30 are rejected for the same reasons as claim 11.

5.   Claims 5 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over

Shtivelman (US 6,157,655) in view of Duncan et al. (US 2002/01411561) and in view of

Barber et al. (US 6,088,435), as applied to claims 1-4, 9-10, 12, 14-17, 22-23 and 25-

26; and in view of Katz (US 5,561,707).

The combination of Shtivelman, Duncan et al. and Barber et al. teaches the

system as claimed, except for activity participated in by a selection of said plurality of

callers comprises a survey or a competition.

Katz teaches "In one operating process format, the public might be polled with

regard to locating the specific purchasers of a defective or dangerous product.

Alternatively, the public might be polled with objective of locating persons susceptible to

a specific ailment or disease. Public auctions of unprecedented participation are

possible. Legal lotteries are enabled that are interesting, effective and very economical

on an individual participant basis. The system also might be employed in various games

formats or to automate a promotion or mail-order operation, even to the extent of

including inventory control as detailed below." (See Col. 3, lines 35-45).

Katz teaches that it is possible to add activities such as survey (or *polls*) and

competitions (or *games*) to a call center (or *ACD*), the information generated by the

callers can be stored and used later as statistical data. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to modify the

combination of Shtivelman, Duncan et al. and Barber et al. as per Katz teachings and

thus obtain a method for estimating wait times in which statistics obtain from these

activities can be used to isolate a select group or subset of callers who can be readily

identified and readily confirmed.

6.   Claims 7-8, 20-21 and 28-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Shtivelman (US 6,157,655) in view of Duncan et al. (US

2002/01411561) and in view of Barber et al. (US 6088435) as applied to claim 1-4, 9-

10, 12, 14-17, 22-23 and 25-26 above; and further in view of Ginsberg (US 6,064,730).

The combination of Shtivelman, Duncan et al. and Barber et al. teaches the

system as claimed, except for publishing said wait time to an interface selected by said

caller and publishing a plurality of criteria utilized to estimated said plurality of call times.

As for claims 7-8, Ginsberg teaches "[...].a caller to have his interests better

served, the present invention enables a user to graphically view a representation of an

organization so as to learn information, such as, the identity, status, availability, and

waiting time, regarding a particular agent who is capable of addressing the user's

concerns. The user can then connect to an appropriate agent. In accordance with the

principles of the invention, a user first connects to a dynamic graphical display of the

organization. This display may include, for example, a map of the organizational

structure, and an indication of each agent and/or agent station, including whether the

station is manned and the length of the particular agent's queue. The graphical display

continuously receives updated information about the organization from one or more

databases, which may include queue information from the organization's PBX. Upon

selecting an agent to whom to be connected, a telephone link or other type of

communication link is opened between the caller and the selected agent. When the

user places himself on an agent's queue that information is provided to the PBX." (See

Summary of the Invention, Col. 2, lines 8-26).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the combination of Shtivelman, Duncan et al. and Barber

et al. by adding an interface selected by said caller for publishing said wait time (as read

on *"a user first connects to a dynamic graphical display"*) and publishing a plurality of

criteria utilized to estimated said plurality of call times (as read on *"to learn information,*

such as, the identity, status, availability, and waiting time, regarding a particular agent"),

as taught by Ginsberg; thus in this manner providing the user with wait times

information regarding a preferred agent or representative and keep the customer

satisfied.

Claims 20-21 and 28-29 are rejected for the same reasons as claims 7-8.

7.   Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over as

being unpatentable over Shtivelman (US 6,157,655) in view of Duncan et al. (US

2002/01411561) and in view of Barber et al. (US 6088435) as applied to claims 1-4, 9-

10, 12, 14-17, 22-23 and 25-26 above, and further in view of Timmins et al. (US

2004/0029567).

It can be seen that the combination of Shtivelman, Duncan et al. and Barber et

al. lacks the limitation specifying "authenticated caller identifier is voice authenticated".

The Examiner takes Official Notice that system and methods are well known in the art to

perform the claimed function. See for example the teachings of Timmins et al. as cited

below.

Timmins et al. teaches "…other biometric measure, are instituted to ensure that

only an authorized user can access select services or groups of services associated,

e.g., with the user's telephone number…The user may be identified based on his/her

voice print on file with the information assistance service." (See Paragraph 0010).

Response to Arguments

8.   Applicant's arguments with respect to claims 1-5,7-18,20-26,28-30 and 34-36

. have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not
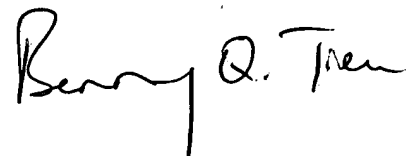
mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Marie C. Ubiles whose telephone number is (703) 305-

0684. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ahmad Matar can be reached on (703) 305-4731. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Marie C. Ubiles
August 22, 2004.

BENNY TIEU
PRIMARY EXAMINER

A.U. 2642